"What's the 411" for US Army Operational Level Fires

A Monograph
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ABSTRACT

"WHAT'S THE 411" FOR US ARMY OPERATIONAL LEVEL FIRES.   By
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In March 1999, military planners considered contingencies in
event that the air campaign to remove Serbian forces from
Kosovo during Operation Allied Force was not successful.
One of those contingencies was a ground offensive, which
presented numerous challenges to the Army. Some of the most
demanding challenges centered around planning fires at the
operational level of war. Inevitably, planners accepted the
potential dilemma of fighting Serb forces in a dynamic
environment to meet the military objective of forcing Serb
forces out of Kosovo. Planning for the Kosovo ground
offensive indicated that serious shortfalls may exist in
doctrine at the operational level, especially involving US
Army operational level fires.

The primary planning manuals for US Army operational level
fires are JP 3-09, *Doctrine for Joint Fire Support*, FM 100-
7, *Decisive Force: The Army in Theater Operations*, and FM
6-20-30, *Fire Support for Corps and Division Operations*.
These doctrinal manuals do provide utility at the
operational level for fire support planners and with minor
revision can become more effective. This monograph supports
this argument by: 1) defining operational level fires; 2)
defining current US Army and joint fire support doctrine and
examining how its execution is affected by the operational
level of war; 3) providing observations regarding fire
support problems and successes at the operational level,
especially in the US Army's Desert Storm campaign in 1991
and the Russian army's Chechen campaign in 1994-1995; and 4)
identifying fire support observations in Operation Desert
Storm and the Chechen campaign that impact current
operational level fire support doctrine.

This monograph identified that the principles for joint fire
support coordination defined in JP 3-09 are paramount to the
US Army successfully planning operational level fires.
Adhering to these principles will help to prevent US forces
from experiencing failure similar to the Russians in
Chechnya and help to ensure success that the US Army
experienced during Operation Desert Storm.

TABLE OF CONTENTS

CHAPTER ONE

INTRODUCTION

In March 1999, military planners considered
contingencies in event that the air campaign to remove
Serbian forces from Kosovo during Operation Allied Force was
not successful. One of those contingencies was a ground
offensive, which presented numerous challenges to the Army.
Some of the most demanding challenges centered around
planning fires at the operational level. Inevitably,
planners accepted the potential dilemma of fighting Serb
forces in a dynamic environment to meet the military
objective of forcing Serb forces out of Kosovo. Planning
for the Kosovo ground offensive indicated that serious
shortfalls may exist in doctrine at the operational level,
especially involving operational level fires.

The Army's fire support community has limited
experiences in actual operational level execution of fires.
Operation Desert Storm, February 1991, offers the most
recent Army experience regarding the use of fire support in
executing the operational level of war. Fighting by the
Russian army, during 1994-1995 in Chechnya, highlights the
difficulties of planning and fighting at the operational
level, particularly those associated with the employment of
fire support assets. Both US and Russian operations
mentioned above identified challenges which were encountered

1

again during planning for ground offensive operations into Kosovo. Deployment of Task Force Hawk to Albania in 1999 capstoned the Army planning for a potential invasion of Serbia. It also showed the difficulties that the Army had in integrating fire support assets with the Air Force.

These difficulties begged the primary research question, "do the primary planning manuals, specifically JP 3-09, *Doctrine for Joint Fire Support,* FM 100-7, *Decisive Force: The Army in Theater Operations,* and FM 6-20-30, *Fire Support for Corps and Division Operations,* provide the doctrine required for planning operational level fires?" This monograph answers that question and shows the utility of current doctrine and recommends changes to improve the quality of fire support doctrine at the operational level of war by answering the following supporting questions: 1) What are operational level fires? 2) What is current US Army and joint fire support doctrine and how is its execution affected at the operational level of war? 3) What observations regarding fire support successes and problems at the operational level have been documented, especially in the US Army's Desert Storm campaign in 1991 and the Russian army's Chechen campaign in 1994-1995? and 4) What fire support observations identified in the Chechen campaign and Operation Desert Storm impact current fire support doctrine? Answering these questions support the

thesis of this monograph that JP 3-09, FM 100-7, and FM 6-20-30 are adequate for planning US Army operational level fires with recommendations to make minor changes to these documents.

Chapter 2

Operational Level Fires

Tactical fires are paramount to supporting combined arms forces at the company, battalion, brigade, and division level. Through the complementary use of tactical air support, attack helicopters, naval gunfire, artillery, maneuver forces are applied simultaneously to destroy the enemy and his will to resist. This synergistic effect of firepower "can be viewed as a joint air attack team (JAAT) that engages all targets with precision."[1] Implementation of a JAAT is considered basic tactics, techniques, and procedures at the tactical level for a fire support element. "The challenge is to conduct the JAAT at the operational level."[2] Do the planning tools available for the US Army, facilitate the fires they bring to the fight for integration at the operational level? First, let us look at what type of operational level fires that the US Army may contribute with its assets, especially Army Tactical Missile System (ATACMS), extended range multiple-launch rocket system (MLRS), and Apache attack helicopters (AH-64s). Specifically these fires are classified as: 1)

simultaneous attack; 2) operational counterfire; 3) operational interdiction fires; and 4) communications, command and control (C3) and destruction of integrated air defense (DIAD) fires.[3]

Simultaneous Attack with Fires. These fires involve operational maneuver supported by tactical level and operational level fires to destroy the enemy's ability to generate and sustain combat power. ATACMS provide the operational level commander an immediate response against potential enemy combat power.

Operational counterfire. Proactive and reactive counterfire against enemy rocket and missile systems. This involves targeting a system. Instead of targeting an individual weapon, targets within a fire support system, like command and control, target acquisition, and support and structure are targeted.

Operational interdiction fires. ATACMS, air support, and attack helicopters are used to "destroy threat forces, before they're introduced into the fight."[4] ATACMS destroys air defense, target acquisition assets, and logistics while attack helicopters and air force assets destroy armored vehicles. The key to successful interdiction is the simultaneity of striking the targets and the synergistic effects that these fires create.

C3 and DIAD fires. The key for attaining effects is the same concept as operational counterfire. The attack of the C3 nodes and integrated air defense umbrella as a system is most commonly known at the joint level as joint suppression of enemy air defense (J-SEAD). This attack should be simultaneous involving air force assets and army field artillery and attack helicopters.

Some debate whether the US Army can even deliver operational level fires or categorize their fires at the operational level. The discussion of the types of operational fires in LTC Johnnie Bone's article, "Joint Precision Strike," supports that the US Army does conduct operational level fires, especially as evidenced in Operation Desert Storm.   The Naval War College Joint Military Operations curriculum considers fires to be operational (versus strategic or tactical) when they have a decisive impact on the conduct of a major operation or campaign by:

    1)   isolating the theater or are of operations;
    2)   restricting enemy freedom of movement;
    3)   preventing or disrupting enemy freedom of maneuver;
    4)   facilitating friendly maneuver;
    5)   preventing the arrival of enemy reinforcements into theater;
    6)   destroying or neutralizing enemy reserves and facilities;
    7)   deceiving the enemy as to the sector or main effort or point of main attack.[5]

In an interview with the *Field Artillery*, General Anthony C. Zinni, United States Marines Corps (USMC), Commander-in-Chief of US Central Command (CENTCOM) was asked the question, "CENTCOM set up the coalition Task Force(CTF) for Operation Desert Thunder, Kuwait, in February *sic* (1998) in response to Saddam Hussein's refusal to comply with UN inspection requirements. What was the organization and purpose of that task force?"[6] General Zinni's answer addressed the relevance of JP 3-09. Specifically he addressed the Joint Task Force's (JTF) mechanism to shift joint fires control from the JTFs to their functional components. General Zinni addressed this part of his answer with a question, "Do we need a joint fires element (JFE) as found in the new JP 3-09, *Doctrine for Joint Fires* or will the expanded operations of Central Command's Joint Targeting Coordination Board (JTCB) do the job?"[7] The point General Zinni was making regarding JP 3-09, and doctrine in general, was that "Doctrine is useful as a guide, but obviously it has to be shaped to fit the requirements in an area of responsibility (AOR), each with unique challenges and procedures."[8] General Zinni's answer indicates that there is some room for interpretation for definitions in doctrine, specifically joint doctrine, based upon the situation, especially one's AOR.

JP 3-09 provides some terms and definitions that provide focus for understanding operational fires.

1) Fires. "...the effects of lethal or nonlethal weapons."[9] Differentiating between lethal and nonlethal is important because classification of fires is sometimes ignored by planners. FM 101-5-1 defines lethal fires as "the delivery of all types of ordnance through both direct and indirect means that contribute to the destruction, disruption, or suppression of the enemy in order to facilitate tactical movement and achieve a decisive impact;"[10] and nonlethal fires as "any fires that do not directly seek destruction of the intended target and are designed to impair, disrupt, or delay the performance of enemy operational forces, functions, and facilities."[11] Examples of nonlethal fires include psychological operations, special operations forces, electronic warfare, like jamming, and other command and control countermeasures.

Specifically JP 3-09 includes effects from naval surface fire support, indirect fire support, maneuver operations, SOF direct action operations, air operations and even nuclear weapons as lethal weapon effects. JP 3-09 categorizes nonlethal weapons effects into electronic warfare (EW), certain psychological operations (PSYOP) such as leaflet drops, some information operations (IO) such as disrupting the enemy's information networks, and the use of

munitions such as illumination, smoke, or incapacitating agents.[12]

2) Joint fires. "...fires produced during the employment of forces from two or more components in coordinated action toward a common objective."[13] A common form of joint fires is joint suppression of enemy air defenses (J-SEAD).

3) Fire support. "...fires that directly support land, maritime, amphibious, and special operations forces to engage enemy forces, combat formations, and facilities in pursuit of tactical and operational objectives."[14] Fire support involves the collective and coordinated employment of lethal and nonlethal fires against targets at the tactical and operational levels of war.

4) Joint fire support. "...joint fires that assist land, maritime, amphibious, and special operations forces to move, maneuver, and control territory, populations, and key waters."[15] Joint fire support is framed by lethal and nonlethal fires too. Lethal fires are generally comprised of close air support (CAS), fixed and rotary wing aircraft, naval surface fire support (NSFS), artillery, mortars, rockets, and missiles. Nonlethal effects are generally categorized by electronic warfare (EW) as previously discussed.

Understanding these basic definitions serves as a spring board to conducting joint fire support coordination,

which is the essence of planning fires at the operational level of war. After understanding the principles of joint fire support coordination, figuring out how, when, and where the Army fits into this process is the next challenge.

Joint fire support coordination is a "continuous process of planning and executing fires."[16] It involves essential tasks like deconflicting attacks, avoiding fratricide, reducing duplication of effort, and assisting in shaping battlespace. This coordination must be "flexible and responsive to the ever-changing dynamics of warfighting"[17] like those encounters by allied and US Army planners during 1998 prior to and during Operation Allied Force.

The flexibility and response needed by joint fires are embedded in four basic fire support tasks outlined in JP 3-09. They are: 1) support forces in contact; 2) support the concept of operation; 3) synchronize fire support; and 4) sustain fire support operations. Supporting these basic tasks are twelve planning principles for joint fire support coordination. These twelve principles are this monograph's criteria for measuring how effective operational fires were employed during the US Army's participation in Operation Desert Storm and the Russian's campaign in Chechnya. These principles provide guidance for ensuring achievement of the basic fire support tasks.

1) Plan Early and Continuously. This principle centers around the effective integration of fire support with the scheme of maneuver. Planning must begin when the commander states his mission and provides his command guidance. Planning is continuous and keeps pace with the dynamics of the battle.

2) Ensure Continuous Flow of Targeting Information. Ensure that the acquisition requirements of the fire support system are identified.

3) Consider the Use of all Lethal and/or Nonlethal Attack Means. Consider the attack means available at user or higher level.

4) Use the Lowest Echelon Capable of Furnishing Effective Support. Delivered by the lowest level having the effective means available.

5) Furnish the Type of Fire Support Requested. The type of fire support must produce the effects that the requester needs.

6) Use the Most Effective Fire Support Means. Requester is usually in the best position to know what is needed.

7) Avoid Unnecessary Duplication. Ensure that duplications of fire support are resolved and that only the minimum force needed to get the desired effects is used.

8)   Coordinate Airspace. Provide input concerning fire

support use of airspace to those agencies and personnel

engaged in airspace management.

9)   Provide Adequate Support. Mission of the force and the

commander's guidance determine the amounts and types of fire

support needed for required effects.

10)   Provide for Rapid Coordination. Must know the

characteristics of the various fire support weapons and have

immediate information on their availability.

11)   Protect the Force. JP 3-09 categorizes this principle

as the prevention of fratricide. It also includes providing

proactive and/or reactive counterfire support.

12)   Provide for Flexibility. Be prepared to conduct on-

order missions, contingency plans, and any branches and

sequels to current plans.[18]

Before looking at Russia's Chechen campaign and

Operation Desert Storm in detail, it is important to

understand how the Army defines operational level fires.

Understanding the US Army's perspective will assist in

seeing if joint doctrine and army doctrine are mutually

exclusive or if they can complement one another. Initial

observations indicate that the Army's concept of operational

level fires are in line with the joint publications,

particularly JP 3-09. FM 100-7 indicates that operational

level fires "are joint, and potentially multinational,

11

activities and are a vital component of any operational plan."[19]   Specifically, FM 100-7 states that the term operational fires

> ...refers to a commander's application of nonlethal and lethal firepower to achieve a decisive impact on the conduct of a campaign or major operation. Operational fires are a separate element of the commander's concept of operations (addressed separately from maneuver) but must be closely integrated and synchronized with the commander's concept of maneuver.[20]

Operational level fires are normally furnished by assets other than those required for the routine support of tactical maneuver. However, as the range of assets used to support tactical maneuver increases, like joint surveillance, target attack radar system (JSTARS), Army Tactical Missile System (ATACMS), extended range multiple-launch rocket system (MLRS), and Apache attack helicopters (AH-64s), these assets will also play a more significant role in the delivery of operational fires by US Army assets. Nonlethal assets like EW, PSYOP, special reconnaissance and special operations forces (SOF) are available for synchronization during war or used separately as seen during stability and support operations (SASO) in Bosnia, 1995-2000, and Kosovo, 1999-2000. The Army has the capability with the aforementioned assets to participate in joint operations or execute its own deep operations, when and if necessary, using operational level fires. The US Army's development of high technology weapons allows for

"increasing range and accuracy of projectile, rocket, and missile systems combined with maneuver and attack capabilities from attack helicopters and light forces, now provide the Army commander with his own organic operational-fires capability."[21] FM 100-7 points out that operational fires do not solely center around delivery assets, but also include targeting and attacking targets "whose destruction or neutralization would have a significant impact on a campaign or major operation."[22]

Like JP 3-09, FM 100-7 focuses operational fires on achieving tasks; however, these tasks are not the same. They are 1) facilitating maneuver, 2) isolating the battlefield, and 3) destroying critical enemy functions and facilities. These tasks are not specifically governed by any principles like those in JP 3-09.

FM 100-7 emphasizes the importance of coordinating joint assets. "The joint force commander (JFC) synchronizes operational level fires as part of the joint planning process. This process entails component coordination and cooperation in the employment of all fires"[23] through the utilization of a Deep Operations Coordination Cell (DOCC) and Battlefield Coordination Element (BCE). Both of these elements play an important part in coordinating operational level fires. The DOCC's role is clearly stated. It is a "proposed fire support element at the operational-level

headquarters that plans, coordinates, and executes employment of operational fires."[24] The most common type of fires are J-SEAD. The DOCC utilizes the BCE to effect "coordination with other services."[25] The BCE's primary mission is to coordinate air support from other services for Army operations. Initially this coordination was primarily with Air Forces assets, but currently is expanded to USMC and other maritime assets.

The same principles found in JP 3-09 are highlighted in FM 6-20-30, *Fire Support for Corps and Division Operations*, except for the principles of providing for flexibility and protecting the force. FM 6-20-30 begins its Chapter 3 entitled "Joint Fire Support Operations" with an overview of what US Army corps and divisions can expect in the form of operations and fires,

> Most operations envisioned for US Army corps and divisions will be joint operations. During these joint operations, a significant portion of fire support will be provided by other services. Similarly, Army corps and divisions will be required to provide fires to support those services.[26]

Specifically FM 6-20-30's Chapter 3 presents aspects regarding US Air Force (USAF) air support, amphibious operations, SEAD, and joint fire support communications. Discussion of these aspects is somewhat outdated as FM 6-20-30 was published on 18 October 1989, over a year prior to the execution of Operation Desert Storm. As of March 2000,

14

no initiative has been made to update FM 6-20-30. The FM 6-20 series manuals are the cornerstone doctrinal manuals for US Army fire support elements, which certainly begs a portion of the primary research question, "does FM 6-20-30 provide doctrine required for operational level fires?" Before this question is answered, a detailed examination of what FM 6-20-30 presents regarding USAF air support, amphibious operations, SEAD, and joint fire support communications is necessary.

USAF Air Support. FM 6-20-30 states that the USAF provides tactical air support to the Army as one of its primary missions through the tactical air control system (TACS) and the Army air-ground system (AAGS) to "establish the personnel, facilities, and communications interface necessary for centralized control of available air support by the air component commander."[27] Its other function is to conduct "the decentralized execution of air attacks in priorities as prescribed by the joint force commander."[28] This facilitates the flexibility of assigned or attached air assets and the centralized control of these assets to be fully exploited. The primary mechanism to do this is through liaison provided by the TACS to brigade level and higher units. The Army's complement to this is the AAGS, which gives the ground forces commander the ability to organize, process, evaluate, and coordinate air

15

support, air reconnaissance, and intelligence with the Air Force. Complementing discussion of USAF air support, FM 6-20-30 provides an in-depth discussion of the air interdiction and close air support (CAS), planning and requesting tactical air support, air tasking order (ATO) planning and coordination process, and air force tactical air reconnaissance.

Amphibious Operations. FM 6-20-30 defines amphibious operations as "an attack launched from the sea by naval and landing forces embarked in ships or other craft for the purpose of landing on a hostile shore."[29]
FM 6-20-30 shows that parts of this section are outdated in its explanation of naval gunfire missions and the difference between direct support versus general support missions. The general support reference to battleships is outdated as these vessels are no longer a part of the naval inventory. The remainder of the naval gunfire section provides clear understanding of fires from destroyers and frigates. Also, considerations and procedures for requesting naval gunfire support are outlined in detail throughout the chapter. This section concludes with information regarding USMC fire support assets associated with a Marine air-ground task force (MAGTF).

Joint Suppression of Enemy Air Defenses. This section is probably the most significant for discussion and analysis

in relationship with US Army operational level fires. FM 6-20-30 defines J-SEAD as "that portion of SEAD operations that requires joint interaction to suppress enemy surface-to-air defenses having an influence on the operational and tactical portion of the Airland battle."[30] Appendix B, Section V of FM 6-20-30 provides an in-depth discussion and procedure for conducting SEAD with the greatest indirect-fire suppression capability of ground and naval forces against enemy capabilities. This section concludes with a general description of the tasks for the fire support coordinator (FSCOORD) to be executed during planning of SEAD. "The FSCOORD brings together the decide-detect-deliver process to accomplish J-SEAD during corps and division operations."[31] His primary responsibilities are to ensure that SEAD targets are developed, if necessary, for each planned AI and CAS sortie. After development of these target arrays, the FSCOORD must synchronize and integrate these SEAD targets with the entire target plan through the ATO.

Joint Communications Interface. This is the last section of the "Joint Fire Support Operations" chapter in FM 6-20-30. Communications and command and control relationships have changed drastically since the publishing of FM 6-20-30 in 1989. This section, for the most part, is obsolete and would not contribute much if any significant

17

information regarding planning joint fire support operations at any level let alone the operational level.

Understanding what the US Army's primary doctrine manuals for planning operational level fires and types of US Army operational fires is paramount to using them as a template to examine two historical examples, the Russian campaign during 1994-1995 in Chechnya and Operation Desert Storm in 1991. These examples show the impact that operational level fires contributed to the failure and success of each of these operations. These operations also provide observations regarding fire support problems at the operational level that have been documented. These fire support observations identified in the Chechen campaign and Operation Desert Storm impact current operational level fire support doctrine.

CHAPTER THREE

CHECHNYA

Andrei Raevshy sets the stage for the Russian campaign into Chechnya in late 1994 through early 1995 in his article "Russian Military Performance in Chechnya: An Initial Evaluation," from *The Journal of Slavic Military Studies.* "The military campaign in Chechnya revealed the full scope and depth of the crisis facing the Russian security, intelligence, and armed forces."[32] The campaign was precipitated by Russia to prevent the Chechnya province from

obtaining its independence, which many former Soviet republics and states attempted to attain at the end of the Cold War. "After President Boris Yelstin signed a secret order to release 150 billion rubles for a plan of 'combat action' against Dudayev, soldiers...were promised 6 million rubles each, powerful backing, the support of the General Staff and a five-fold superiority for a short, easy campaign against Chechen separatists."[33] An "easy campaign" was far from the enormous hardships and challenges that the Russians would ultimately face.

> The events which followed revealed severe problems which were blamed on the military at all levels of the armed forces: poor command and control, shortage of trained troops, refusal of units and commanders to execute orders, low morale, poorly maintained equipment, etc. Most striking was the fact that the operation was executed with tactics diametrically opposed to Russian military thinking. Unfortunately, this was overlooked by many commentators who spoke of 'classical' Russian military tactics such as 'massive firepower,' 'overwhelming superiority of forces' or of 'vastly outgunned Chechens.' None of this is, in reality, supported by facts.[34]

Prior to the Russian operation into Chechnya, one would probably have anticipated a generally easy victory for the Russians. "The Russian armed forces probably have more experience in offensive urban warfare than any other army in the world: during World War II, the Soviet Army freed 1,200 cities from the German Army."[35] Instead, the Russian army was not prepared to fight any type of battle, let alone undertake the monumental military mission of military

19

operations on urbanized terrain (MOUT), which would be the focus of the Chechen campaign as its primary objective was recapturing the capital of Grozny. Difficulties of this campaign are further highlighted by the Russians inability to use operational level fires to assist in linking their strategic aims with tactical actions. Observations of the Russian's initial assault of Grozny, the Chechen capitol, reveal not only the difficulties of MOUT, but also the integration, planning, coordination and execution of operational level fires. There is irony in the Chechen campaign, which may be observed when comparing what happened with expectations such as those depicted by the Russian Defense Minister Grachev, who boasted that a single parachute regiment could take Grozny in a couple of hours. The emancipation of Grozny "was going to be a bloodless blitzkrieg."[36] The 'old regime' Russian leadership anticipated an operation similar to Prague 1968. Even then, the Russians adequately prepared for resistance through intense and deliberate maneuvers and train-up periods. Preparation and execution of the Chechen campaign and the attack to seize Grozny depicted a pathetic army that continued to "rust away" since the fall of the Berlin Wall in 1989.

The endstate of the battle for Grozny showed the difficulties and savagery of MOUT warfare. The endstate

also revealed the difficulty and failure of the Russians to plan, coordinate, and execute operational level fires to facilitate their campaign. Four thousand rounds per hour fell in Grozny versus 350 per hour in Sarajevo prior to the commitment of NATO to enforce the Dayton Peace Accords. Russians lost 20 of 26 tanks and 102 of 120 BMPs in the initial battle; Russian soldiers were hung upside down in windows or hung on crosses in city center; by 7 February 1995 one-seventh of the Russian brigade that led the assault into Grozny had viral hepatitis. Military leaders could not differentiate between police actions and combat in cities.[37] The participants and their tactics and strategy defined the brutal outcome of the initial stages of the Chechen campaign.

Forces available for the Russians included 38,000 soldiers, 6,000 in the attack; 230 tanks; 454 BMPs; 388 tubes of artillery. The Chechens had available: 15,000 soldiers; 50 tanks; 100 armored vehicles; 60 tubes of arty; 150 anti-aircraft guns; plus, access and influence over the press, local population, knowledge of the city.[38]

The plan for each side showed strengths and weaknesses. The Russians plan was a three-pronged attack from the north, west, and east. The south was left open. The plan required high level of movement and coordination in dictated time frames with inadequate reconnaissance and communication with

its headquarters. The Chechen plan concentrated on defense and guerrilla tactics. The Chechens occupied the city center and established three perimeters. Each perimeter was a concentric circle at one, one and a half, and five kilometers from Grozny's center. The plan also incorporated multiple ambushes with the intent to channelize Russian forces. The Chechens could exercise freedom of movement from within Grozny. They also planned destruction of refineries and chemical plants.[39] Specifically, Chechen tactics concentrated on exploiting the Russian vulnerabilities exposed through their use of armor. Chechens let armored columns into the city. Then, they sealed off the city and conducted a methodical annihilation of Russian forces. Columns were halted by first killing their lead and rear vehicles, which were engaged from the tops of buildings or from basements where tank guns could not reach. Chechen rebels also employed guerrilla tactics that consisted of: shooting Russian soldiers' legs, then shooting those coming to help, and booby trapping of doorways, breakthrough areas, entrances to sewers, and bodies.[40]

Based upon past history, Russian strategists estimated that Grozny, with a population of 400,000 people, would be defended by 15,000 regular soldiers with the potential to draw upon an additional 30,000 to 40,000 paramilitaries with

up to 500,000 men on full mobilization.[41] The strategists

planned for an overall superiority of 6:1.[42] The Russians

initially deployed with 23,800 men, including 4,700 men of

the Ministry of Internal Affairs, 80 tanks, 208 APC/IFVs and

182 artillery pieces. Eventually these forces increased to

38,000 soldiers, 230 tanks, 454 APC/IFVs and 388 artillery

pieces.[43]

Russians did have numerical superiority. However, this

was not sufficient to achieve the Russian military objective

of capturing Grozny. Grozny, the Chechen capital, was

rapidly surrounded by Russian forces from the west, north,

and east with little difficulty.[44] However, many commanders

refused to commit their forces against Grozny, because of

the use of inexperienced soldiers with minimal preparation.

General Podkolzin, Commander of the Airborne Forces,

admitted that the units which had participated in the

storming of Grozny had no training in urban warfare, let

alone "minimal combat training, some of them had only

harvested potatoes, and that only very few fully trained or

professional elite units had been sent in..."[45]

Chechens did not fight the Russians in the suburbs.

Instead, they let them penetrate the streets of the center

of the city "where the Russian armor could not maneuver nor

exercise its firing range and where the Chechens encircled

and destroyed them."[46] Grozny showed the grim reality of

23

MOUT, specifically at the mid- to high- intensity levels,
" ...for what has probably been the most violent and longest
battle in a city since WWII."[47] The battle of Grozny joins
the infamous "battles for the control of Beirut, Mogadishu,
Vukovar and many other cities...demonstrating that urban
warfare is one of the most difficult tasks which can be
given to any army."[48] Examining the fire support aspect in
detail, regarding the Chechen campaign, with special
emphasis on the Battle for Grozny, shows this difficulty.
The fire support aspect also shows the Russians difficulty
of integrating, planning, coordinating, and executing
operational level fires.

Major Gregory J. Celestan provides an accurate and
detailed overview, through the use of actual Russian
documents, of the employment of fire support assets in his
Field Artillery article, "Red Storm: The Russian Artillery
in Chechnya." The Russians initiate the Chechen campaign
with Cold War Soviet tactics. The dynamics of the Chechen
battlefield, particularly the MOUT, force the Russians to
adjust their doctrine. Although the Russians attempted to
tailor their fire support doctrine to the complex MOUT
environment, highlighted by the assault into Grozny, fire
support did not provide the decisive effects that the
Russian military leaders hoped to attain.

24

The Russian Army initially planned a two-fold use of its fire support assets. First, it integrated its fire support assets as a part of its combined armies team. "Soviet doctrine stated that the battalion was the most effective means of attacking targets. Massed, centralized artillery was recognized as the best means to destroy targets on the battlefield."[49] Second, it used fire support "as a shock weapon to demoralize and break opposing forces."[50] Historically, Russian artillery destroyed the majority of the targets during its conflicts. Chechnya was no different. "The main difference in Chechnya was the use of artillery as a means, in itself, as opposed to being used as part of a combined armies team."[51] Commanders were not confident in conducting offensive operations without fire support.

Several articles in Russian military publications, that Celestan studied, discuss artillery employment throughout Chechnya. A common theme throughout these articles is the "realization that the quantity of fire employed during a battle depends on the situation and can't be planned using standard rules of engagement."[52] A Russian colonel, Sergey Leonenko, stated bluntly in his 1995 article for *Armeyskiy Sbornik (Army Digest)*, "It is obvious there can be no recommendations for employing artillery in taking a city either in terms of duration or method of fire. The fact is

that in one case, troops take a city using all weapons without restrictions and in another case, under orders to preserve the city as a cultural and economic center."[53] The Russian army primarily used field artillery platforms to inflict this undisciplined and indiscriminate use of fire support.

The Russians employed a variety of cannon, rocket and missile artillery during the Chechen campaign. Specifically, the Russians fired 2S1-122mm self-propelled howitzers, 2S3-152mm self-propelled gun-howitzers, 2S19-152mm self-propelled guns, 2S23-120mm self-propelled howitzers-mortars, BM21-grad 122mm multiple rocket launchers, and BM22-Uragan 220mm multiple rocket launchers.[54] The Russian army plan to use centralized artillery tactics failed miserably as they received unexpected levels of resistance, and consequently, high casualties. The Russians changed their method of task organizing artillery assets in an attempt to prevent future occurrences of heavy casualties. "Russian commanders decided to break up the larger combat formations and assign small artillery sub-units to these miniature task forces. The task force commander assumed responsibility for the artillery sub-unit as he employed it by platoons or individual pieces during the street fighting."[55]

Cold War Soviet doctrine dictated that the battalion was the lowest tactical unit to aid in the massing of concentrated fires on the battlefield.[56] "In Chechnya, each battalion sized task force had a battery of self-propelled howitzers, one to two batteries of mortars and one to two batteries of divisional artillery, which were broken down into smaller detachments to fight...Russians employed this technique to counter Chechen strongpoints in buildings and along crossroads."[57]

After adjusting their tactics, the Russian army used artillery "to pave the way for the rest of their forces along city streets. Direct fire became the approved method to destroy strongpoints and fortified buildings."[58] Direct fire engaged targets from a range of 150 to 200 meters. This technique provided an effective method to control the inexperienced cannoneers that lacked proper communication systems.

Most operations consisted of Russian artillery and aviation units executing strikes "until the local commander felt all resistance had been destroyed. A mounted patrol was dispatched, and if it encountered any return fire, it withdrew and the bombardment commenced again."[59] Chechens caught onto this quickly and would leave the cities as Russian artillery set-up and infiltrate the cities as the patrols were conducted. "There is little, if any evidence,

27

of coordinated maneuver unit and artillery assaults on villages."[60] This was compounded by the challenges of fire support coordination.

This analysis shows that the Russians were able to identify a tactical problem with their fires. Nowhere is it documented that the Russian campaign plan had a specific concept for integrating fires at the operational level to assist in linking the strategic aims of the campaign with tactical actions. Rather the Russians utilized only tactical fires and made their adjustments to assist in achieving tactical objectives. The Russians became so preoccupied with the tactical achievements that firepower, especially artillery, attack aviation, and air force assets that they primarily concentrated its effects on the tactical application to win battles. There is no evidence to suggest that integration of operational level fires were a major part of campaign plan. This fixation led the Russians to misuse their fires as evidenced by the amount of collateral damage inflicted on the city of Grozny.

> Overwhelming firepower can make up for
> organizational and tactical deficiencies in the
> short-run if one is willing to disregard collateral
> damage. When all else failed, the Russians fell
> back upon their least inventive option,
> overwhelming fire power, to take Grozny. Use
> of massed artillery and air-delivered ordnance,
> while rather heavy-handed, allowed Russian
> security forces to gain control of Grozny after
> two months of fighting.[61]

Fire support coordination was one of the biggest challenges for the Russian army. The assault into Chechnya had Russian forces approaching Grozny on north, west, and east axes. "These units were formed into temporary organizations that did not have a habitual working relationship and never trained together. As a result, the Russians were unable to mass their significant artillery assets."[62] It was also obvious that the Russians did not execute any integration of operational level fires to link their strategic aims with tactical actions. The Russian campaign into Chechnya provided many lessons for the US fire support community to consider in updating its doctrine for MOUT. This campaign also shows the necessity to not overlook the importance of incorporating operational level fires into the campaign plan.

The Russians had strategic bombing assets to facilitate the shaping of the battlefield. However they were executed with minimal effectiveness. The Russian utilized strategic bombing "to shape the battlefield, especially during the early phases"[63] of the Chechen campaign. The Russians employed MiG-3 (Foxhound), Su-27 (Flanker), Su-25 (Frogfoot), Su-17 (Fitter), and Su-24 (Fencer) short-range bombers to strike approximately 1,000 Chechen targets. These targets included bridges, petroleum facilities, ammunition dumps, road networks, fortified areas, military

equipment repair facilities, command and control facilities, and enemy air fields.[64] The Russians also used long-range bombers, Tu-22M3 (Backfire), "to close approach and escape routes around the cities of Gudermes, Shali, and Argun."[65] Although these examples show that the Russians employed strategic air assets, they were not integrated as part of the overall Russian campaign plan. Rather, these examples show the disconnect of effectively implementing of strategic assets to support the Chechen campaign versus the actual use to support the tactical actions of the assault on Grozny.

The Chechen campaign example highlights the Russian failure to adequately implement operational level fires into their campaign. Russian forces used strategic and operational assets to solely support tactical actions. These fires were also used in an undisciplined, indiscriminate manner thus compounding the problem the Russians had with these assets. Operation Desert Storm shows US forces, especially the Army, maximizing the effects of operational level fires. Although these fires led to success during Operation Desert Storm, issues still existed. Issues that can assist future US Army operational level fire support doctrine.

CHAPTER 4

OPERATION DESERT STORM

30

Operation Desert Storm provides the US Army with an example in history on successfully conducting operational level fires. Even as society enters the millennium, debate rages about the political and strategic successes of Operation Desert Storm. However, the tactical and operational success achieved by coalition forces cannot be debated. The success at these levels of war were primarily driven by operational level fires. Even at the tactical level, operational level fires had a significant impact on the battlefield success of VII and XVIII (US) Corps and coalition forces. There is still debate among experts about what assets actually led to the success of the operational level fires. Some say it was the air force alone. Others opine that it was technology that influenced the operational level fires capability. If technology played this significant part, then the US Army, with its ATACMS and Apache helicopters, played a significant role in the execution of operational fires during Operation Desert Storm. Regardless, operational level fires were paramount to the tactical and operational success of Operation Desert Storm. Although there is the debate of what service or combination of services promulgated battlefield success with operational level fires, certain issues arose that with some bad luck or opposition against a more formidable foe could lead to disaster for US forces.

31

> Both of our services gained important insights
> into 21st century military operations from the
> Gulf War; however, there are divergent inter-
> pretations of that brief conflict. Relations
> between the Army and Air Force became strained
> as each tried to incorporate and capitalize on
> lessons learned in the Gulf. We recognized
> doctrinal disparities and quickly began an
> effort of cooperative review to ensure our
> preeminence as the world's finest air-land team.[66]

Many fire support issues arose during Operation Desert

Storm. LTC William Welch, a plans officer for the XVIII

Airborne Corps 1st BCE, outlined specific issues in a June

1992 article of the *Field Artillery*. He emphasized the

importance of joint fires "...to making joint warfare work-

to synchronizing our total combat power and defeating the

enemy quickly with minimum loss of US lives."[67] Issues that

LTC Welch addressed that are relevant for today's

battlefield include ATO, BCE, CAS, precision guided

munitions (PGMs), battlefield duds, friendly fire incidents,

and the fire support coordination line (FSCL). It is with

the FSCL that LTC Welch opined grave concern.

> The FSCL generated a tremendous amount of debate over
> how to use it. If an Army commander draws
> a line on a map, it should mean what he thought
> it meant when he drew it. When higher headquarters
> change the rules, it causes unnecessary confusion
> in an already extremely confusing situation.[68]

This focus is primarily on planners using non-doctrinal

coordination measures and their ineffective or improper use

of what is probably one of the most important fire support

coordination measures (FSCMs) to a fire support coordinator

the fire support coordination line (FSCL). The FSCL issue
is still debated in 2000 and was highlighted in an article
from *Joint Force Quarterly*, which examined joint control
measures. The article emphasized the need to deconflict who
controls the FSCL. "The Air Force considered joint air
forces component commanders (JFACCs) as best suited to
coordinate operations beyond FSCLs, while the Army thought
land component commanders (LCCs) should plan and synchronize
fires in the entire land area of operations (AO)."[69]

Although Operation Desert Storm was overall a success
at the tactical and operational levels, many issues to
improve fighting at these levels arose, especially for the
fire support community. The most significant issue for the
US Army fire support community is to resolve is the FSCL
issue. Efforts by military leadership, like Generals Reimer
and Foglman, to work out issues like deconflicting the FSCL,
are steps in the right direction. However, these resolved
issues must be etched in doctrine at the joint and US Army
levels to ensure minimal interference during next conflict
involving military forces of the US.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

The twelve principles for planning fire support from JP 3-09, discussed in Chapter Two of this monograph, show the effectiveness of operational level fires in Russia's Chechen campaign and in the US Army's Operation Desert Storm. These twelve principles also validate that current doctrine in JP 3-09, FM 100-7, and FM 6-20-30 is adequate for planning US Army operational level fires in future operations with the recommendation of minor changes to these documents.

Obviously the Russian military does not ascribe to US doctrine. We can, however, validate the utility of our doctrine by observing trends in the Russian's Chechen campaign per JP 3-09, FM 100-7, and FM 6-20-30, if the US military was put into a similar situation of Grozny. In many ways the situation in Chechnya resembles the situation in Kosovo prior to the success of Operation Allied Force. These trends can assist the US Army fire support community in updating its current doctrine.

Although Russian planners failed to adequately integrate operational fires to achieve their campaign objectives, they did ascribe to some of the twelve planning principles. Ascribing to only some of these principles does not guarantee success as evidenced by the Russian military in late 1994 and early 1995. These difficulties were

further compounded by the failure to integrate operational

level fires with the campaign plan to ensure strategic aims

were met through tactical actions on the battlefield.

1) Plan Early and Continuously. The Russians did not

effectively integrate fire support with the scheme of

maneuver, especially at the beginning of the campaign. When

the Russians did incorporate this integration, it was only

at the tactical level, never at the operational level.

Planning did not begin when the Russian president nor

Russian military commander stated his mission and aims.

Rather, the Russian military was forced into battle without

much preparation for training soldiers, units, and

developing campaign plans.

2) Ensure Continuous Flow of Targeting Information.

Although the Russians were facing an inferior enemy, they

appeared at a disadvantage. Russian forces did not

capitalize on their technological advantages nor did they

conduct an aggressive IO campaign that would have assisted

in targeting and possibly minimized collateral damage

effects.

3) Consider the Use of all Lethal and/or Nonlethal Attack

Means. The Russians had many attack means at their

disposal, which they used to maximize effects, especially

for the tactical level commander. However, Russian military

leaders failed to integrate these potential effects into operational level plans.

4)   Use the Lowest Echelon Capable of Furnishing Effective Support.   The Russian method of delegating fire support assets to subordinate commanders for planning and execution paid big dividends as tactical commanders were able to produce the effects they felt necessary for success.   Again, this was offset by the higher headquarters failure to incorporate the tactical level plans into their overall operational level plans, especially scheme of fires.

5)   Furnish the Type of Fire Support Requested.   The Russian military did this indiscriminately and in an undisciplined manner as evidenced by the enormous amounts and impact of collateral damage.

6)   Use the Most Effective Fire Support Means. The Russians executed this with the same effect as "Use the Lowest Echelon Capable of Furnishing Effective Support" principle. Once again, the advantages gained were offset by the failure to incorporate desired effects into the operational level plan.

7)   Avoid Unnecessary Duplication.   The Russian military had no system in place to prevent any unnecessary duplication. This was often a factor in the excessive collateral damage caused by fires.

8) Coordinate Airspace. No evidence regarding the deconflicting of airspace was discovered.

9) Provide Adequate Support. Reiterating what is a common theme with the Russian fires is evidenced in this principle. Although the tactical commander received his necessary effects, the overall result did practically nothing in helping reach the campaign aims.

10) Provide for Rapid Coordination. Overall, Russian military commanders were adroit at identifying weapon systems that gave them adequate effects.

11) Protect the Force. The Russian military had minimal opportunities to exercise any type of counterfire since the air force destroyed almost all large caliber artillery systems at the outset of the campaign. Minimizing fratricide was one of the disciplined efforts the Russian army and air force did exercise through constant battletracking and communications between shooters, sensors, and requesters of fires.

12) Provide for Flexibility. This principle was rarely executed by the Russian military. Most plans were oriented on the occupation of Chechnya and the subsequent assault and capture of Grozny. The plans did not require flexibility of fires to execute other plans in conjunction with a current operation or a change of mission.

Overall the Russian military failed to adequately integrate operational level fires to achieve their campaign objectives. However, they did ascribe to some of the twelve planning principles. But ascribing to only some of these principles did not guarantee the Russian military success with fires at the operational level. This was further compounded by the failure to integrate operational level fires with a campaign plan to ensure strategic aims were met through tactical actions on the battlefield.

Effective use of the fire support planning principles by the US Army during Operation Desert Storm helped the US military and coalition forces attain success at the tactical and operational levels. Although overall the US Army effectively used these principles there are areas that the US Army fire support community must incorporate based upon lessons learned during Operation Desert Storm to make current doctrine even better. This analysis addresses only those recommendations to assist in improving planning doctrine found in JP 3-09, FM 100-7, and FM 6-20-30.

1) Ensure Continuous Flow of Targeting Information. Overall the US Army did a good job of identifying the fire support system acquisition requirements. The issue for the twenty-first century is being able to adequately plan for and integrate all new fire support systems, especially those allocated for the Force XXI transition. Doctrine must

address these assets and provide planners with options of how, when, and where to use them.

2) Consider the Use of all Lethal and/or Nonlethal Attack Means. The US Army was an important component of delivering lethal fires, especially at the operational level with ATACMS and AH-64s. The US Army was also instrumental in its portion of nonlethal attack means to shape the battlefield in various capacities, like PSYOPS. During the late 1990s and early 2000s IO plays a more prominent role than ever before. Doctrine must address IO's new importance. The US Army should focus on what IO's role is at the operational level to assist the operational commander. This focus will assist commanders' focus of effects in developing and executing operational level plans.

3) Use the Most Effective Fire Support Means. As addressed earlier, the issue for the twenty-first century is being able to adequately plan for and integrate all new fire support systems, especially those allocated for the Force XXI transition. Doctrine must address these assets and provide planners with options of how, when, and where to use them. This will allow planners to maximize those systems to enable the most effective fire support means to provide the desired effects.

4) Coordinate Airspace. US Army participation at the operational level with fires puts its assets in direct

conflict with other services. It is paramount that planners deconflict these assets. Doctrine that discusses in detail formal and informal methods to deconflict fires and assets will assist in minimizing the difficulty and challenges of different services competing for airspace.

5) Provide for Rapid Coordination. The discussion of the FSCL in the Operation Desert Storm section of this monograph is at the crux of this principle. The services, especially the Army and Air Force, must come to agreement on the use of the FSCL. Until doctrine addresses the FSCL as a nonpermissive fire control measure, it must be addressed for what it is-a permissive control measure. Therefore, when it is drawn as a part of the operational graphics, any fires beyond it do not have to be coordinated. Joint doctrine must address this permissive nature of the FSCL until it is changed, if ever.

6) Protect the Force. Overall the services did a superb job of providing proactive and reactive counterfire support during Operation Desert Storm. Methods to minimize the sensor to shooter time must be continually addressed and posted in doctrine to minimize time and confusion between services as often sensors, shooters, and requesters are from different services. In the age of technological advances fratricide is still a significant factor. Doctrine must address technological advances to minimize fratricide and

40

ensure understanding between the services to maximize the survivability of all services' delivery assets, soldiers, airmen, marines and sailors.

7) Provide for Flexibility. Operation Desert Storm saw the flexibility of all services in conducting on-order missions and branches and sequels to plans during the operation. With a different array of symmetrical and asymmetrical enemies flexibility for fires is as important as ever. Doctrine must ensure that planners are aware of the ever-increasing need to execute contingency plans, on-order missions, and branches and sequels caused by a "new world order" enemy. Observations of post-Desert Storm operations like, Somalia, Haiti, Bosnia, and Kosovo will show lessons learned that doctrine can incorporate to assist planners in the future.

The Russian campaign in Chechnya and the US Army's role in Operation Desert Storm reflect different armies and operations. Still, in each campaign operational fires played a significant part in achieving or failing to achieve strategic aims caused by tactical actions on the battlefield. The US Army should take away lessons learned from the Russians failure to implement operational fires during the Chechen campaign. The US Army must continue to address issues encountered during Operation Desert Storm that would have made the operation even better.

Incorporation of these azimuth checks into future joint and US Army doctrine will provide the tools needed by planners of US Army operational level fires.

ENDNOTES

[1] Major Johnnie Bone, Jr. "Joint Precision Strike-The Field Artillery Contribution," *Field Artillery* (February, 1993): 18.
[2] Ibid.
[3] Ibid. Bone discusses these types of operational fires in his article "Joint Precision Strike," 18.
[4] Ibid.
[5] Naval War College JMO Department, *Operational Functions*, (January, 1996): 6. Used in a paper by Lieutenant John C. Burgess, Jr. submitted to the Naval War College, Joint Military Operations Department, dtd 20 May 1996.
[6] Patricia Hollis "Joint Integration: The Key to Combat Effectiveness," *Field Artillery* (December, 1998): 8
[7] Ibid.
[8] Ibid.
[9] US Joint Chiefs of Staff, *JP 3-09, Doctrine for Joint Fire Support* (Washington, DC: US Government Printing Office, 1995), I-1.
[10] Headquarters, Department of the Army, FM 101-5-1, Operational Terms and Graphics (Washington, DC: Department of the Army, 1997), 1-66.
[11] Ibid., 1-110.
[12] JP-09, I-1.
[13] Ibid.
[14] Ibid.
[15] Ibid.
[16] Ibid., III-7.
[17] Ibid.
[18] Ibid., III-7-III-13. These pages discuss in detail the twelve principles of joint fire support coordination.
[19] Headquarters, Department of the Army, *FM 100-7, Decisive Force: The Army in Theater Operations* (Washington DC: Department of the Army, 1995), 5-3.
[20] Ibid.
[21] Ibid., 5-5.
[22] Ibid., 5-3.
[23] Ibid., 5-9.
[24] Ibid.
[25] Ibid.
[26] Headquarters, Department of the Army, *FM 6-20-30, Fire Support for Corps and Division Operations* (Washington DC: Department of the Army, 1995), 3-1.
[27] Ibid.
[28] Ibid.
[29] Ibid., 3-13.

30   Ibid., 3-16.
31   Ibid.
32   Andrei Raevsky "Russian Military Performance in
Chechnya: An Initial Evaluation," *The Journal of Slavic
Military Studies* (December, 1995):   681
33   "Moscow's Covert War in Chechnya," *JIR Pointer,* December
1994, quoted in Raevsky, "Russian Military Performance in
Chechnya," 681.
34   "Raevsky, "Russian Military Performance in Chechnya,"
681.
35   V. G. Reznichenko, *Taktika* (Moscow: Voenizdat, 1981)
quoted in Raevsky, "Russian Military Performance in
Chechnya," 681.
36   Pavel Litovkin, "Ministry of Defense of the Russian
Federation: General Grachev Calls the Version About Russian
Army Participation in the Chechen Conflict Nonsense,"
Izvestiya, 29 November 1994 quoted in Raymond Finch, "Why
the Russian Military Failed in Chechnya," (On-line)
Available
http://call.army.mil/call/fmso/fmsopubs/issues/yrusfail/yrus
fail.htm, 27 October 1999.
37   Russell W. Glenn, *Denying the Widowmaker* (Washington D.
C.: RAND, 1998):   51. Russell W. Glenn's "Summary of
Proceedings RAND-DBBL Conference on MOUT" in the pamphlet
Denying the Widow-maker provides an account of Russian
combat in the Chechen campaign in late 1994 through early
1995. Specifically, Appendix D of this pamphlet outlines a
briefing by Mr. Timothy Thomas entitled "The Battle for
Grozny January, 1995." Thomas depicts lessons learned and
Russian opinions about some the most lethal combat
experiences in history.
38   Ibid., 53.
39   Ibid.
40   Ibid., 55.
41   Figures quoted by Col. Gen. Kulikov based on the
personal archive of Dudayev seized on 25 Jan 9. Richard
Woff, "Who's Who in the Chechen Operation," *JIR,* April 1995,
used in Raevsky, "Russian Military Performance in Chechnya,"
682.
42   Jean Le Cudennec, "La Bataille Pour Grozny," *Raids*,
April 1995, used in Raevsky, "Russian Military Performance
in Chechnya," 682.
43   "Krisen und Konflkte-Tschetschenien," *OMZ*, used in
Raevsky, "Russian Military Performance in Chechnya," 682.
44   "Counting the Costs of Chechnia," *JIR* Pointer, April
1995, used in Raevsky, "Russian Military Performance in
Chechnya," 684.

45 Nina Bachkatov and Andrew Wilson, "Techetchenie: Histoire d'un conflit," *Les Dossiers du Grip,* 1995, quoted in Raevsky, "Russian Military Performance in Chechnya," 684.

46 "Russland/Tschetschenien-Konflikt," *OMZ,* February 1995, quoted in Raevsky, "Russian Military Performance in Chechnya," 685.

47 Raevsky, "Russian Military Performance in Chechnya," 687.

48 Ibid., 687

49 Gregory J. Celestan, "Red Storm: The Russian Artillery in Chechnya," *Field Artillery,* (January-February 1997): 43

50 Ibid., 42.

51 Ibid., 43.

52 Ibid., 42

53 Sergey Leonenko, "Capturing a City," *Army Digest,* No. 3 1995, quoted in Celestan, "Red Storm," 42.

54 Celestan, "Red Storm," 43

55 Sergey Leonenko, "Capturing a City," *Army Digest,* No. 3 1995, quoted in Celestan, "Red Storm," 43.

56 This method of employment is discussed in Foreign Broadcast Information Service, JPRS-UMA-85-012-L, "The Artillery Battalion in Combat," 1 May 1985, and also discussed in Celestan, "Red Storm," 43.

57 Celestan, "Red Storm," 43.

58 Ibid.

59 Ibid.

60 Ibid.

61 *Urban Warfare: Lessons From the Russian Experience in Chechnya: 1994-1995,* from http://wwwgeocities.com/Pentagon/6453/chechnyaA.html, 24 March 2000.

62 Celestan, "Red Storm," 43.

63 *Urban Warfare: Lessons From the Russian Experience in Chechnya: 1994-1995,* from http://wwwgeocities.com/Pentagon/6453/chechnyaA.html, 24 March 2000.

64 This information is listed as a part of the operational lessons learned in *Urban Warfare: Lessons From the Russian Experience in Chechnya: 1994-1995.*

65 Ibid.

66 Dennis J. Reimer and Ronald R. Fogleman, "Joint Warfare and the Army-Air Force Team," *Joint Force Quarterly,* (Spring, 1996): 10.

67 Lieutenant Colonel William G. Welch, "Notes from the BCE: Observations on Joint Combat Operations at Echelons Above Corps," *Field Artillery* (June, 1992): 21.

68 Welch, "Notes from the BCE," 20-21.

69 Reimer and Fogleman, "Joint Warfare and the Army-Air Force Team," 10.

BIBLIOGRAPHY

Bone, Major Johnnie L., Jr. "Joint Precision Strike-The
    Field Artillery Contribution." *Field Artillery*,
    February 1993: 16-18.

Burgess, Lieutenant Colonel John C., Jr. "Operational
    Fires: Maximizing Effectiveness." Paper of Joint
    Military Operations, Naval War College, 1996.

Celestan, Major Gregory J. "Red Storm: The Russian
    Artillery in Chechnya." *Field Artillery*, January-
    February 1997: 42-45.

Combined Arms Doctrine Directorate. *CGSC Student Test
    100- 40: Offensive and Defensive Tactics.* Fort
    Leavenworth: Command and General Staff College, 1999.

Finch, Raymond C. "Why the Russian Military Failed in
    Chechnya." (On-line) Available http://call.army.mil/
    call/fmso/fmsopubs/issues/yrusfail/yrusfail.htm. 27
    Oct 1999.

Headquarters, Department of the Army. *FM 6-20-10: The
    Targeting Process.* Washington D.C.: Department of
    the Army, 1996.

Headquarters, Department of the Army. *FM 6-20-30: Fire
    Support for Corps and Division Operations.* Washington
D.C.: Department of the Army, 1989.

Headquarters, Department of the Army. *FM 6-20: Fire
    Support in the Airland Battle.* Washington D.C.:
    Department of the Army, 1988.

Headquarters, Department of the Army. *FM 6-121: Target
    Acquisition.* Washington D.C.: Department of the
    Army, 1990.

Headquarters, Department of the Army. FM 100-7:
    Deci*sive Force: The Army in Theater Operations.*
    Washington D.C.: Department of the Army, 1995.

Headquarters, Department of the Army. *FM 101-5-1:
    Operational Terms and Graphics.* Washington D.C.:
    Department of the Army, 1997.

Headquarters, VII (US) Corps. "The One Hundred Hour
    Ground War: The Failed Iraqi Plan." Reprinted by
    Army Knowledge Network, Fort Leavenworth, KS, 1994.

Hollis, Patrecia Slayden. Interview with General Anthony
    C. Zinni, USMC, Commander-in Chief of US Central
    Command. "Joint Integration: The Key to Combat
    Effectiveness." *Field Artillery*. November- December,
    1998: 7-10.

Ingram, Judith. "Russia Raises Specter of War." *The
    Kansas City Star*, 28 Sep 1999.

MOUT Concept Paper. "Army Urban Operations." (On-line)
    Available http://CADD/FM90-10/CP/AD/09/30/99.

Musayev, Ruslan. "Russian Rockets Kill 118 in Chechnya."
    (On-line) Available http://www.aol.com/ap/chechnya.

Peters, Ralph. "The Future of Armored Warfare."
    Parameters 3 (Autumn 1997): 50-59.

Peters, Ralph. "Invading Kosovo: A Battle Plan."
    Newsweek, 3 May 1999: 49.

Raevsky, Andrei. "Russian Military Performance in
    Chechnya. "*The Journal of Slavic Military Studies*,
    December 1995: 681-688.

Reimer, General Dennis J. and General Ronald R. Fogleman.
    "Joint Warfare and the Army-Air Force Team." *Joint
    Force Quarterly*, Spring, 1996: 9-15.

Rigby, Major General Randall L. "Report Out: 1996
    Senior Fire Support Conference-Focusing Fires for
    Force XXI." *Field Artillery*. May-June, 1996: 18-
    21.

Scales, General Robert H. *Certain Victory: The US Army
    in the Gulf War*. Washington, D.C.: Office of the
    Chief of Staff United States Army, 1993.
Scales, Robert H. *Firepower in Limited War*. Novato, CA:
    Presidio Press, 1995.

Schultz, Major Gregory B. "Coordinating Operational Fires
    for the Twenty-first Century." Monograph, School of
    Advanced Military Studies, US Army Command and
    General Staff College, 1998.

Thomas, Timothy L. "The Battle of Grozny: Deadly
    Classroom for Urban Combat." *Parameters* 2 (Summer
    1999): 87-102.

"Urban Warfare: Lessons From the Russian Experience in Chechnya: 1994-1995." (Online) Available http: //www.geocities.com/Pentagon/6453/chechnyaA.html. 24 March 2000.

US Joint Chiefs of Staff. *Joint Pub 3-0, Doctrine for Joint Operations*. Washington, DC: US Government Printing Office, 1995.

US Joint Chiefs of Staff. *Joint Pub 3-09, Doctrine for Joint Fire Support*. Washington, DC: US Government Printing Office, 1998.

US Joint Chiefs of Staff. *Joint Pub 5-0, Doctrine for Planning Joint Operations*. Washington, DC: US Government Printing Office, 1995.

Welch, Lieutenant Colonel William G. "Notes from the BCE: Observations on Joint Combat Operations at Echelons Above Corps." *Field Artillery,* June, 1992: 16-21.